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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/691,120 | 10/22/2003 | Nathan K. Meckel | 11329.16 | 5346 |

7590 12/09/2004

NYDEGGER & ASSOCIATES
348 Olive Street
San Diego, CA 92103

EXAMINER

SY, MARIANO ONG

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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3683

DATE MAILED: 12/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/691,120

Applicant(s)

MECKEL, NATHAN K.

Examiner

Mariano Sy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 9-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 17-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 06282004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's election with traverse of Group I, claims 1-8 and 17-20 in the reply filed on November 5, 2004 is acknowledged. The traversal is on the ground(s) that search and examination of all species herein could be made without serious burden. This is not found persuasive because claims 9-16 are drawn to method for manufacturing a coated brake disk classified in class 427, subclass 580.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 6 and 18 are objected to because of the following informalities:

Claim 6, lines 1-2 "said a first coating layer" should be --said first coating layer--,

Claim 18, lines 1-2 "said a first coating layer" should be --said first coating layer--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 17-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 17 recites the limitation "a coating overlying surface" in line 5. It is unclear if applicant is referring to --a coating overlying said flat surface--.

Claim 20 recites the limitation "recited in claim 16" in line 1. It is unclear if applicant is referring to --recited in claim 17--.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 2, 5-7, and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi et al. (U.S. Patent Number 6,110,303).

Re-claim 1 Takahashi et al. disclosed a coated brake disk comprising a brake disk substrate made of a titanium alloy; and a coating overlying at least a portion of said substrate, said coating comprising a first coating layer having an amorphous structure such as hard chromium and a second coating layer comprising a coating material selected from the group of coating materials consisting of a titanium nitride and titanium carbide, see col. 1, lines 24-27 and col. 3, lines 15-18.

Re-claim 2 wherein said metal nitride is a nitride of an active metal selected from the group of active metals consisting of, see col. 1, lines 24-27 and col. 3, lines 15-18.

Re-claim 5 wherein said metal carbide is a carbide of an active metal selected from the group of active metals consisting of, see col. 1, lines 24-27 and col. 3, lines 15-18.

Re-claims 17 and 20 Takahashi et al. disclosed a coated brake disk comprising: a brake disk substrate made of a titanium alloy and formed with at least one substantially flat surface, having a substantially annularly shaped, for contacting a brake pad during braking; and a coating overlying said flat surface, said coating comprising a first coating layer of a metal and a second coating layer comprising a coating material selected from the group of coating materials consisting of a metal nitride, a metal oxide, a metal boride and a metal carbide, see col. 1, lines 24-27 and col. 3, lines 15-18.

Re-claims 6 and 18, wherein said first coating layer comprises an amorphous metal, see col. 1, lines 24-27 and col. 3, lines 15-18.

Re-claims 7 and 19, wherein said titanium alloy is selected from the group of titanium alloys consisting of, see col. 1, lines 24-27 and col. 3, lines 15-18.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3, 4, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al. in view of Bauer et al. (U.S. Patent Number 6,759,117).

Re-claims 3 and 4 Takahashi et al. failed to disclose a coating material selected from the group of coating materials consisting of metal oxide and metal boride.

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Bauer et al. teaches the use of coating materials consisting of metal oxide such as aluminum oxide (see col. 11, line 10) and metal boride such as titanium boride, aluminum boride and zirconium boride (see col. 4, lines 41-42).

It would have been obvious to one of ordinary skill in the art to have used the coating materials consisting of metal oxide and metal boride in the brake disk of Takahashi et al., in view of the teaching of Bauer et al., in order to increase the life and performance of the brake disk.

Re-claim 8 Takahashi et al. was silent to disclose wherein the brake disk is for use on a motorcycle.

Bauer et al. teaches the use of the brake disk on a motorcycle (see col. 11, lines 15-16).

It would have been obvious to one of ordinary skill in the art to have used the brake disk of Takahashi et al. on a motorcycle, as taught by Bauer et al., since it is well known that all vehicle such as motorcycle uses brake disk in stopping the motion of the vehicle.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Schaffer, Jr. et al. (US 5,569,543).

Takahashi et al. (US 5,922,452).

Jones et al. (US 5,957,251).

Takahashi et al. (US6,491,142).

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mariano Sy whose telephone number is 703-308-3427.

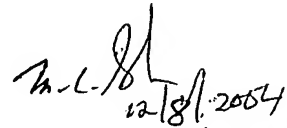
The examiner can normally be reached on Mon.-Fri. from 9:00 A.M. to 3:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bucci, can be reached on 703-308-3668. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 M. Sy

December 3, 2004


12/8/2004
MATTHEW C. GRAHAM
PRIMARY EXAMINER
GROUP 310